Lakeshore Route Bus Transit Study Toronto-Hamilton

April 1980

Marshall Macklin Monaghan Limited

Ontario Ministry of Transportation and Communications

004888

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July 30, 1980

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Attention: Mr. L.R. Kidman, P.Eng., Manager

Dear Sirs:

We are pleased to submit this report entitled "Lakeshore Route Bus Transit Study, Toronto-Hamilton". This report has been completed in accordance with the study terms of reference dated April 5, 1979, and subsequent direction from the Technical Committee.

The co-operation, assistance and guidance provided thoughout the study by members of the Technical Committee, staff from the agencies involved and representatives from the Ministry of Transportation and Communications, Ontario, has been greatly appreciated.

The findings and recommendations of the study, should assist in rationalizing and improving the cost effectiveness of inter-regional bus transit services in the Lakeshore West corridor between Toronto and Hamilton.

Yours very truly

MARSHALL MACKLIN MONAGHAN LIMITED

G.H. Johnston, P.Eng.
Project Director

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Project Manager

LRL:W/P

URBAN DOCUMENTATION CENTRE
RESEARCH UNIT FOR URBAN STUDIES
McMASTER UNIVERSITY
HAMILTON, ONTARIO

ACKNOWLEDGEMENT

The Consultant's Team wishes to express its appreciation to the members of the Technical Committee for the co-operation, assistance and guidance provided throughout the study.

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LAKESHORE ROUTE BUS TRANSIT STUDY
TORONTO-HAMILTON

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LAKESHORE ROUTE BUS TRANSIT STUDY
TORONTO-HAMILTON

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1. Introduction

LAKESHORE ROUTE BUS TRANSIT STUDY

1. INTRODUCTION

In April, 1979, the Transit Office of the Ministry of Transportation and Communications, Ontario initiated a study:

> "to review all bus transit services currently offered in and around the GO Transit Lakeshore bus route between Toronto and Hamilton, as illustrated in Figure 1.1, to:
>
> - identify deficiencies/duplications
> - determine the potential for rationalization and integration of the identified services
> - minimize the need for provincial and municipal subsidies consistent with the required level of service for the current and near future demand."

STUDY AREA-FIGURE 1.1

A Technical Committee consisting of representatives from the transit operating agencies, the Regional Planning Departments in the study area and the Transit Office of the Ministry of Transportation and Communications, directed the study conducted by Marshall Macklin Monaghan Limited.

Initially the study concentrated on examining alternative concepts for the following services:

- Lakeshore GO Bus Route 2682, operating between Hamilton and Toronto
- GO Bus Routes 2683A and 2683B, operating peak services between Oakville and Toronto and Mississauga and Toronto respectively.
- provision of a peak period bus service between East Oakville and the Clarkson GO station

At the direction of the Technical Committee the study was expanded to include a review of:

- the inter-regional transit requirements in the Hamilton to Burlington corridors in light of proposed changes to the existing bus routes and the need for additional bus transit services.

The study involved six major phases, specifically these were:

Phase 1 - Data Collection
Phase 2 - Ridership Demand Forecasting
Phase 3 - Analysis
Phase 4 - Development of Alternatives
Phase 5 - Evaluation and Recommendation Formulation
Phase 6 - Development of Implementation Strategy

This report presents a description of the existing transit services in the corridor, an evaluation of each service, the alternative service concepts analyzed, the recommendations, financial impact and the implementation strategy. The study is based upon extensive data collection, analysis and evaluation of several alternative transit service concepts, and input from the Technical Committee.

The study is documented by two separately bound reports, in additional to this report: a Technical Appendix which presents the data collected during the undertaking of the study and a Summary Report which presents a synopsis of the entire study process. This report is also supplemented by the study report entitled Inter-Regional Bus Transit Study - Oakville to Hamilton - 1978, produced by Marshall Macklin Monaghan Limited on behalf of the Ministry of Transportation and Communications, Ontario.

2. Summary

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HAMILTON, ONTARIO

2. SUMMARY

The Lakeshore Route Bus Transit Study, Toronto - Hamilton, was initiated by the Transit Office of the Ministry of Transportation and Communications, Ontario, to identify inter-regional transit services which could be rationalized and integrated to provide cost effective bus transit routes, consistent with the required level of service for the current and near future demand.

Direction and assistance in the undertaking of this study was provided by a Technical Committee consisting of representatives of the Transit Office, Ministry of Transportation and Communications, Regional Transportation Planning Departments and transit operating agencies in the study area.

This chapter presents a synopsis of key findings, determined in the data collection and analysis phase, and an outline of the study recommendations.

2.1 Background

Inter-municipal and inter-regional transit services in the Lakeshore West Corridor are currently provided by both T.A.T.O.A. and the local municipal transit systems crossing municipal and regional boundaries. The existence of several transit services in the corridor, both inter-regional services and local routes, results in overlaps, parallel service and duplications of service with the net result of providing alternate system options for transit riders within the study area. Of particular interest in this study was the analysis of the following bus services:

- Lakeshore GO Route 2682, operating between Hamilton and Toronto
- GO Route 2683A and 2683B, operating peak period services between Oakville and Toronto and Mississauga and Toronto respectively

- Peak period bus service requirements between East Oakville and the Clarkson GO Station
- Inter-regional bus transit service requirements in the Hamilton to Burlington corridors

The key findings and study recommendations presented in this chapter reflect these study topics.

2.2 Key Findings

The following is a description of key considerations related to inter-regional bus transit services operated in the GO Lakeshore West Corridor.

- routing overlaps and duplications of service between GO bus routes in the Hamilton to Burlington corridors present the potential for rationalization of transit services while maintaining a similar level of service.

- no adequate commuter bus service is provided between Burlington and the Hamilton industrial area.

- existing low transit modal split in the Hamilton to Burlington corridor is indicative of inadequacies in the services currently provided and of the potential for a higher transit market penetration.

- high percentage of ridership is achieved between adjacent municipalities

- GO bus routes do not conveniently interface with local transit services in Oakville or Mississauga.

- GO routes often duplicate, and in some instances operate in competition with services offered by local transit systems.

- current cost recovery and annual operating deficits on GO bus routes are not desirable

- Lakeshore GO bus, Route 2682, does not connect to GO Rail stations

- GO bus Routes 2683A and 2683B, provide express service to/from downtown Toronto with no fare surcharge

Further details of the analysis of existing services are presented in Chapter 4. Additional information regarding ridership statistics, travel characteristics and analysis of existing services are also presented in the separately bound Technical Appendix.

2.3 Recommendations

Based on the detailed analysis and evaluation of the alternative service concepts for the rationalization and integration of bus transit services in the Lakeshore West corridor, the following recommendations and service changes as illustrated in Figure 2.1 are proposed for introduction during the five year planning horizon, according to a staged implementation schedule.

Service Improvements

Route 2682 - GO Lakeshore

- Terminate the GO Lakeshore bus service at the Burlington GO Station.

- Expand the peak period services of Canada Coach Lines, Route 16, between Burlington and Hamilton, to interface with the GO Lakeshore service and have T.A.T.O.A. administer the service.

Existing GO Lakeshore Route 2682

Proposed peak period GO Commuter Service (Hamilton to Burlington).
Clarkson GO Station
Proposed peak period GO Express Service (Burlington to Hamilton Industrial)
Proposed GO Commuter Service Hamilton to Burlington (replacing existing H.S.R. Route 53.)

Recommended Improvements GO Lakeshore Route 2682

Lakeshore Route Bus Transit Study

Fig. 2.1
Recommended Improvements Lakeshore West Corridor

- Provide a connection between the Hamilton Street Railway and Burlington Transit in the north-west corridor to maintain the service link of the Lakeshore route.

- Implement a commuter service operated by the Hamilton Street Railway/Canada Coach Lines between Hamilton and Burlington replacing the Hamilton Street Railway Route 53 and have T.A.T.O.A. administer the service.

- Maintain the present Lakeshore Route 2682 service connection to the Burlington Bus Terminal (Elizabeth Street).

- Provide a connection on the GO Lakeshore service to the Clarkson GO Rail Station.

- Introduce a peak period express service between Burlington and the Hamilton industrial area, operated by the Hamilton Street Railway/Canada Coach Lines and administered by T.A.T.O.A., to supplement the proposed commuter service.

- Upon introduction of the Milton-Streetsville GO Rail service, and providing capacity exists on the Lakeshore GO Rail line, terminate the Lakeshore GO bus services at the Clarkson GO Rail Station. In the interim, reroute and terminate the GO Lakeshore bus at the Islington Subway Station.

Route 2683A - Oakville Peak

- Introduce a fare surcharge (implemented April 1, 1980).

- Monitor the effect of other service connections to the Clarkson GO Rail Station to assess futher need of Route 2683A.

Route 2683B - Mississauga Peak

- Introduce a fare surcharge (implemented April 1, 1980).

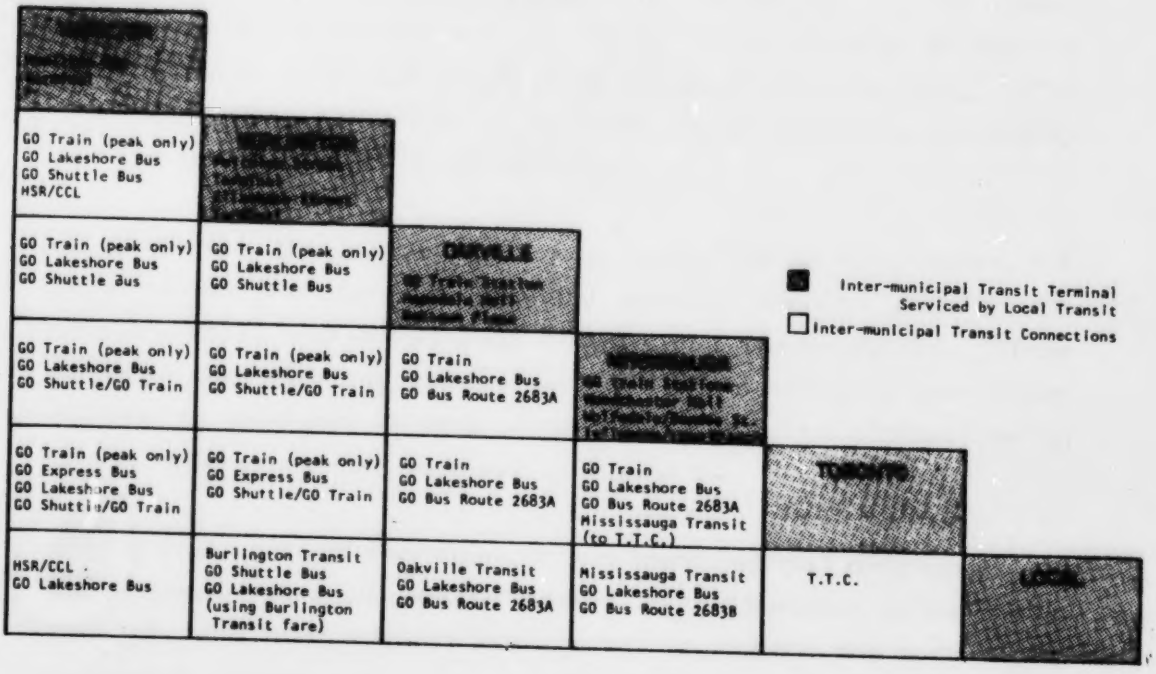
- Consider termination of Route 2683B upon introduction of the Milton-Streetsville GO Rail service.

3. Existing Transit Services

3. EXISTING TRANSIT SERVICES

Inter-municipal and inter-regional transit services in the Lakeshore West Corridor are currently provided by both T.A.T.O.A. and the local municipal transit systems crossing municipal and regional boundaries. The existence of several transit services in the corridor results in overlaps, parallel service and duplications of service with the net effect of providing alternate system options for transit riders within the study area.

The following table, Figure 3.1, presents a synopsis of the existing transit services within the Lakeshore West Corridor and, where applicable, lists alternate system/service options for transit passengers wishing to travel between selected origin-destination points along the Lakeshore route.



ALTERNATIVE TRANSIT SERVICES -
LAKESHORE WEST CORRIDOR FIGURE 3.1

As illustrated, T.A.T.O.A. provides numerous inter-municipal connections within the Lakeshore West Corridor. In the majority of the identified links, transit riders are provided with an alternate means of reaching their destination either by other GO services, or, in selected cases, by local carriers crossing municipal boundaries. This chapter presents a general description of the transit services operated in the study area; further details are presented in Chapter 4 and in the supplementary Technical Appendix.

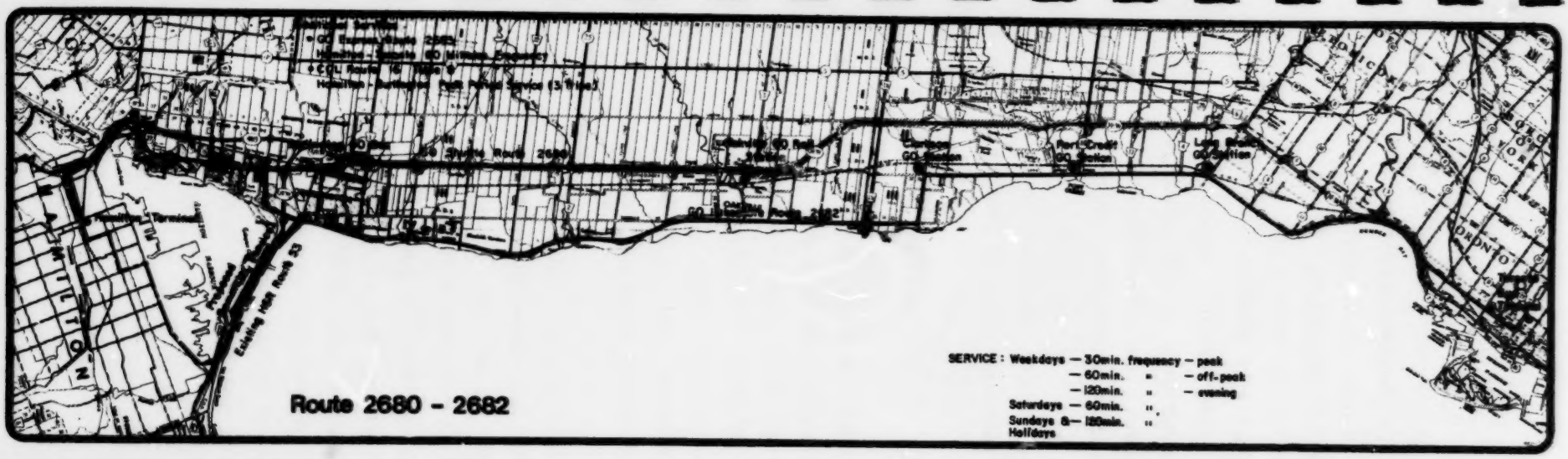
3.1 GO Transit - Toronto Area Transit Operating Authority

Bus Services

The GO Lakeshore bus service (Route 2682), the principal service under review in this study, operates between the Hamilton Bus Terminal and the Bay/Dundas Terminal in Toronto generally at a frequency of service on weekdays of 30 minutes in the peak, 60 minutes in the off-peak and 120 minutes in the evening; 60 minutes on Saturdays and 120 minutes on Sundays and holidays. The scheduled travel time required to cover the 72 kilometres separating the two terminal points is 125 minutes.

In addition to the GO Lakeshore bus route, this study addresses the peak period bus services provided between Oakville and Toronto (Route 2683A) and Mississauga and Toronto (Route 2683B). These services provide local pick-up within each municipality and travel express to downtown Toronto along the Q.E.W. The detailed routing of the existing services is shown in Figure 3.2.

During the course of the study, it was identified that deficiencies and duplications in transit service existed in the Hamilton to Burlington corridors and further study was carried out, beyond the scope of the Lakeshore service, to address the overall transit service need between Hamilton and Burlington. The study included a review of the GO Express bus service, Route 2683, operating between Hamilton and Toronto at an hourly frequency; the GO Shuttle bus service, Route 2680, operating between Hamilton and Oakville with a 20 minute frequency in the peak and a 60 minute frequency in the off-peak; and a review and assessment of the proposed GO commuter bus route proposed to be operated between Burlington and the Hamilton industrial area.


Route 2680 - 2682
SERVICE : Weekdays — 30min. frequency — peak
— 60min. " — off-peak
— 120min. " — evening
Saturdays — 60min. "
Sundays & Holidays — 120min. "

Lakeshore Route Bus Transit Study

Fig. 3.2

Existing Transit Services
Lakeshore West Corridor

Rail Service

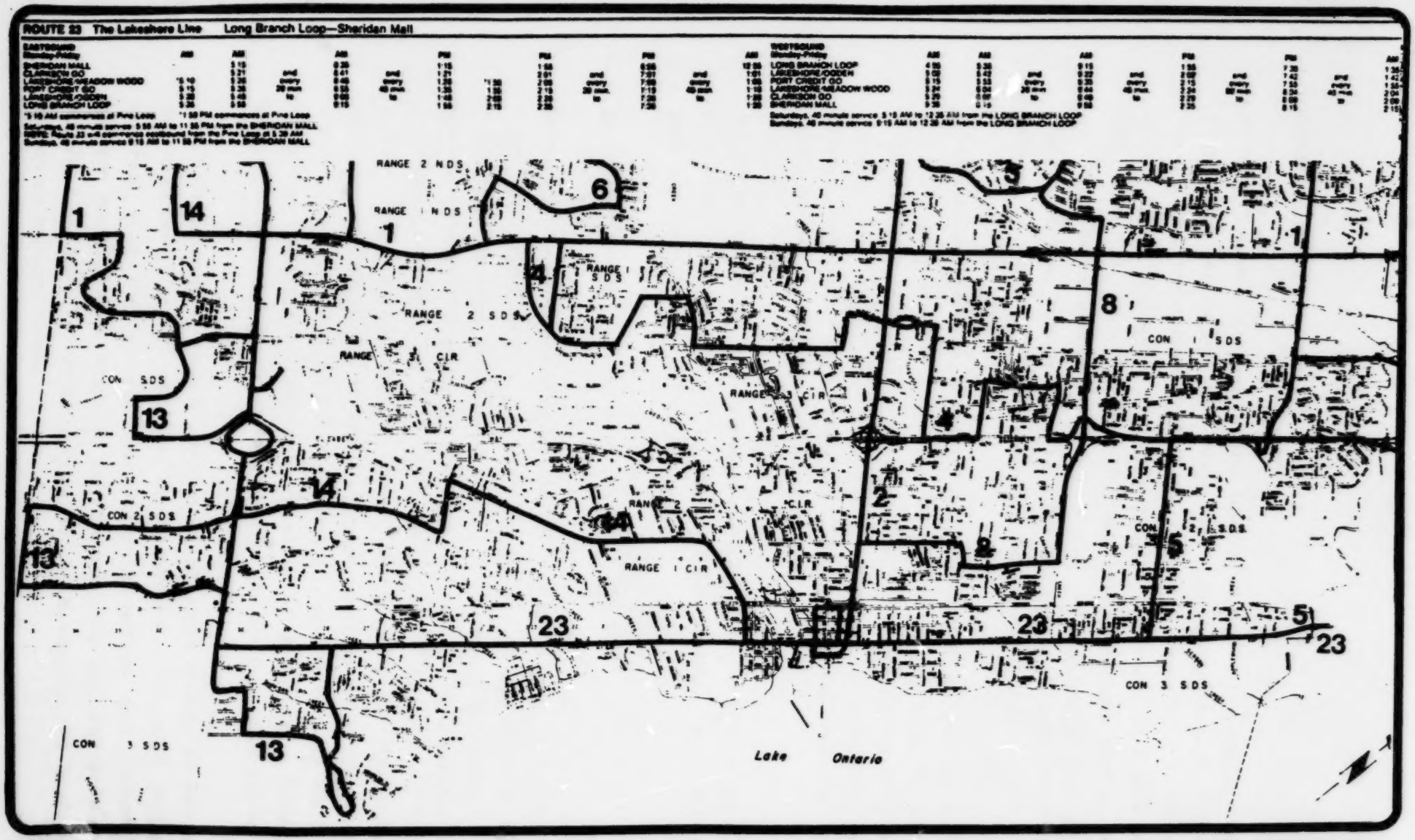
Rail services operated by T.A.T.O.A. in the Lakeshore West Corridor were reviewed to assess the feasibility of integrating inter-regional bus and rail transit services at selected locations in the study area. Along the Lakeshore corridor, rail service is provided by GO Transit between Oakville and Toronto at a weekday frequency of service of 20 minutes during peak periods and on an hourly basis during off-peak hours, Saturdays, Sundays and holidays. Limited service in the peak direction, consisting of two trains in the morning and evening rush hours, is provided between Hamilton and Toronto.

These services are operated by the Canadian National Railway Company through agreements with T.A.T.O.A.

3.2 Mississauga Transit

Mississauga Transit, operated by the City of Mississauga, provides a fixed route system consisting of eighteen routes. Transit service is provided along major arterials throughout the City with feeder services to the Islington Subway Station (T.T.C.), the GO train stations along the Lakeshore corridor and the Long Branch T.T.C./GO Train terminal. Figure 3.3 shows the existing transit services provided south of Dundas Street.

Of particular interest to this study, is the Lakeshore Line (Route 23) operating between the Sheridan Mall and the Long Branch Loop, duplicating GO Route 2682, along Lakeshore Road. The route operates at a peak period frequency of 20 minutes, Monday to Friday; while during off-peak periods, Saturdays and Sundays the frequency of service is reduced to 40 minutes. Since the extension of service from the Pine Loop to the Sheridan Mall in March 1979 there has been a significant increase in ridership (56 percent when compared over the same time period in 1978). Route 23 connects to the three GO train stations servicing Mississauga: Clarkson, Port Credit and Long Branch.



MISSISSAUGA TRANSIT ROUTE MAP
(LAKESHORE CORRIDOR)

EFFECTIVE JULY 1979

Fig. 3.3

Lakeshore Route Bus Transit Study

3.3 Oakville Transit

Oakville Transit, operated by the Town of Oakville, provides a fixed route type service on five route pairs operating throughout the Town. The three main routes, 1, 7 and 9, provide a 30 minute service daily, Monday to Saturday between the hours of 6:00 A.M. and 12:00 P.M. with increased frequency to 20 minutes during the peak periods as illustrated in Figure 3.4. All bus routes meet and connect at the Oakville GO Train/Bus station to provide transfers between Oakville routes and connections to the GO Train.

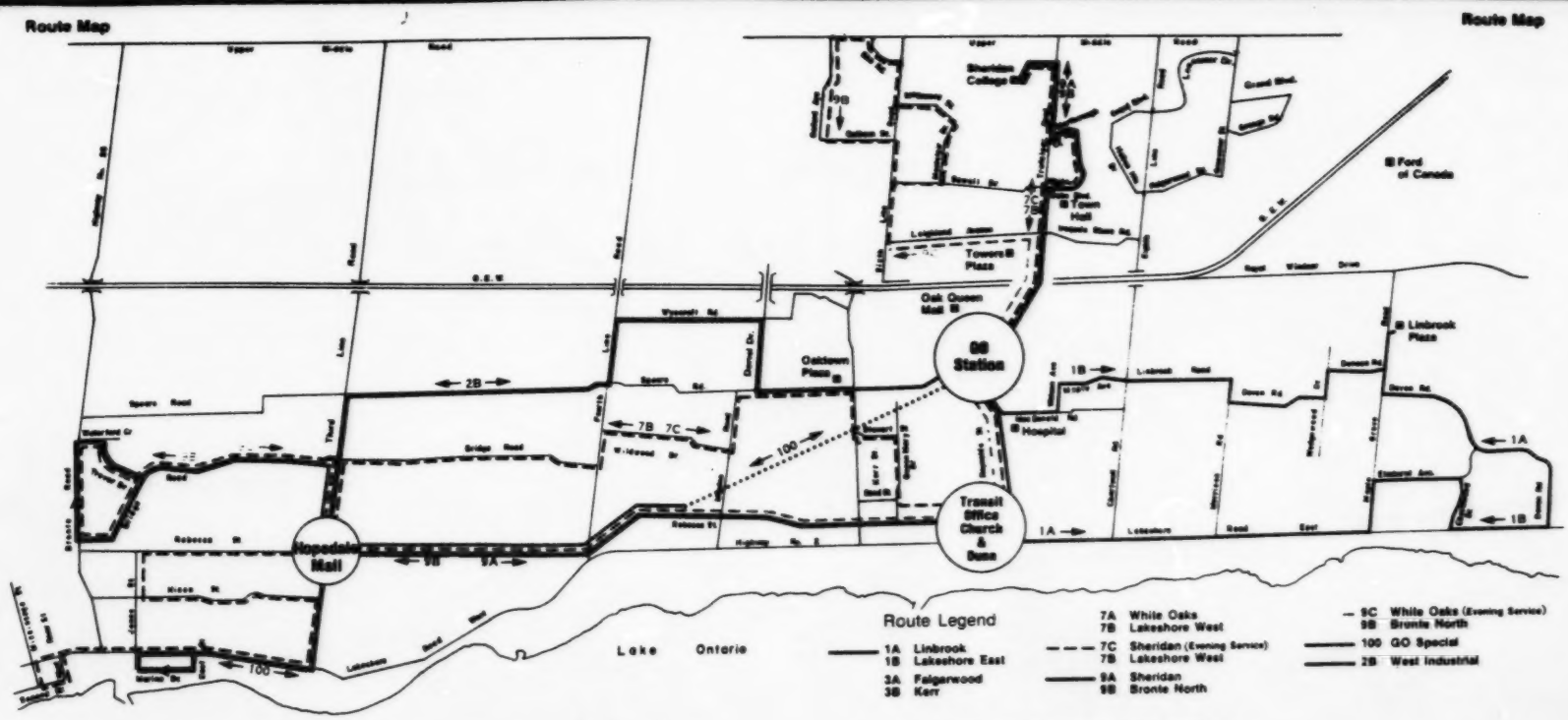
Additional bus services are provided on weekdays during the A.M. and P.M. peak hours. These include: Route 2B servicing the west industrial area and a GO Special service. The GO Special service, operated by Oakville Transit, is a peak period service operating between Lakeshore Road West/Jones Street and the Oakville GO Station to connect with the GO Rail Service.

Ridership statistics and surveys exhibit a significant shift in orientation between the GO station and the downtown area during peak and off-peak periods respectively.

3.4 Burlington Transit

Burlington Transit, operated by the City of Burlington, provides a fixed route type service operating on a network of seven routes throughout the City. The seven routes, as illustrated in Figure 3.5, operate between the hours of 6:00 A.M. and 11:00 P.M. Monday to Thursday, 6:00 A.M. to 12:00 A.M. Friday and Saturday, and 9:15 A.M. to 6:15 P.M. on Sundays. The frequency of service throughout the weekday depending on the particular route is either 15 or 30 minutes, except during the early morning and late evening hours, when the frequency of service is either 20 or 30 minutes. Sunday service is provided on 60 minute headways on the five major routes.

The Burlington bus terminal, located on Elizabeth Street, serves as the focal point for the municipal transit service. The major routes originate from the terminal, permitting connections and transfers between routes and to inter-city carriers operating from the terminal. Routes 2, 3 and 6 provide service to the Burlington GO bus/rail Station on Fairview Street.



Oakville Transit Information 844-0881

SERVICE OPERATES MONDAY THRU SATURDAY
NO SERVICE ON SUNDAY OR STATUTORY HOLIDAYS

TRANSIT OFFICE — 115 DUNN ST.

HOURS { 8:30 A.M. — 4:30 P.M. Monday thru Friday
8:30 A.M. — 12:00 Noon Saturday

LOST & FOUND INFORMATION — 844-0681

Every endeavour is made to maintain all published schedules. However, the System cannot accept responsibility for failure to do so, and such schedules are subject to change without notice.

Other Transportation Information
GO Transit — 630-3833
Burlington Transit — 639-0550
Mississauga Transit — 279-5800

Fare Structure

ADULTS	40¢
SENIOR CITIZENS with proof of age	25¢
STUDENTS (Elementary and Secondary) Secondary School Students required to show Oakville Transit Student Card at Driver request	25¢
COMMUNITY COLLEGE STUDENTS With Oakville Transit Identification Card	30¢
PRE-SCHOOL CHILDREN INCLUDING KINDERGARTEN PUPILS Free — when accompanied by an adult, limited to a maximum of two children with one adult, otherwise student fare applies	
BABIES IN ARMS Free at all times	

EXACT CASH FARE REQUIRED

Have YOU any Service Suggestions?

WRITE

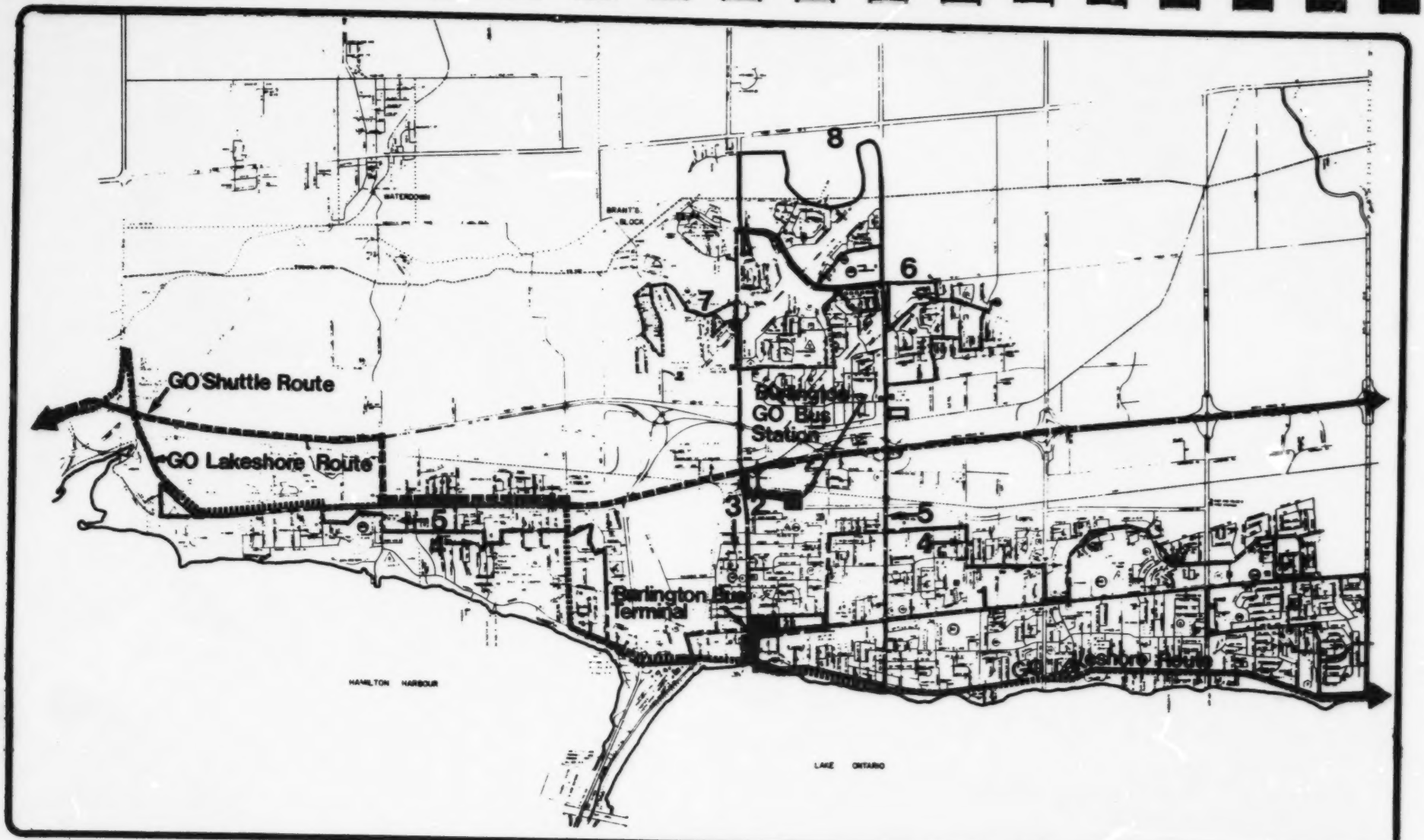
The Transit Advisory Committee
c o TOWN OF OAKVILLE
P. O. BOX 310
OAKVILLE, ONTARIO
L6J 5A6

OAKVILLE TRANSIT ROUTE MAP

EFFECTIVE APRIL 1979

Fig. 3.4

Lakeshore Route Bus Transit Study



Lakeshore Route Bus Transit Study

Fig. 3-5

Burlington Transit Route Map

The new GO Station on the north side of Fairview Street, east of Brant Street, was opened for service in October 1979, initially providing facilities for the GO Transit bus service previously using the Guelph Line bus terminal. As a result of the move, Burlington Transit Routes 2 and 3 were rerouted to service the Fairview Street facility and minor changes were also made to routes 6, 7 and 8.

The Hamilton Street Railway Company, Route 53, and the Canada Coach Lines, Route 16, operate inter-municipal service between Hamilton and Burlington, and also provide limited local service within the City of Burlington.

The GO Lakeshore bus service operating on Plains Road, Kings Road and Lakeshore Boulevard, is under agreement with the City of Burlington to provide local service along this route within the municipal boundaries. Local passengers pay the Burlington Transit fare and the City pays T.A.T.O.A. the difference between the municipal fare and the GO tariffs plus a monthly administration charge of $600.00. This agreement has recently been expanded to include the GO Shuttle Bus, Route 2680, within the City of Burlington municipal boundaries.

3.5 Hamilton Street Railway

Transit service within the City of Hamilton and its environs is provided by the Hamilton Street Railway Company which is owned by the Regional Municipality of Hamilton-Wentworth and administered by the Transportation Committee. Daily service is provided on most arterial and major collector roads throughout the City. The Hamilton Street Railway Company service pertinent to this study is the inter-city transit service, Route 53, operated between Hamilton and Burlington.

Route 53 operates between the Hamilton Terminal and the Burlington Bus Terminal via Beach Boulevard and also connects to the Burlington GO Terminal. The hours of operation are from 5:45 A.M. to 1:34

A.M. on weekdays, with reduced levels of service offered in the evening, on Saturdays, Sundays and holidays. The basic service utilizes two buses, operating on a frequency of one hour, and an additional three buses are added in both the A.M. and P.M. peak hours which increases the frequency of service to 30 minutes. Figure 3.6 illustrates the routing of the H.S.R. Route 53.

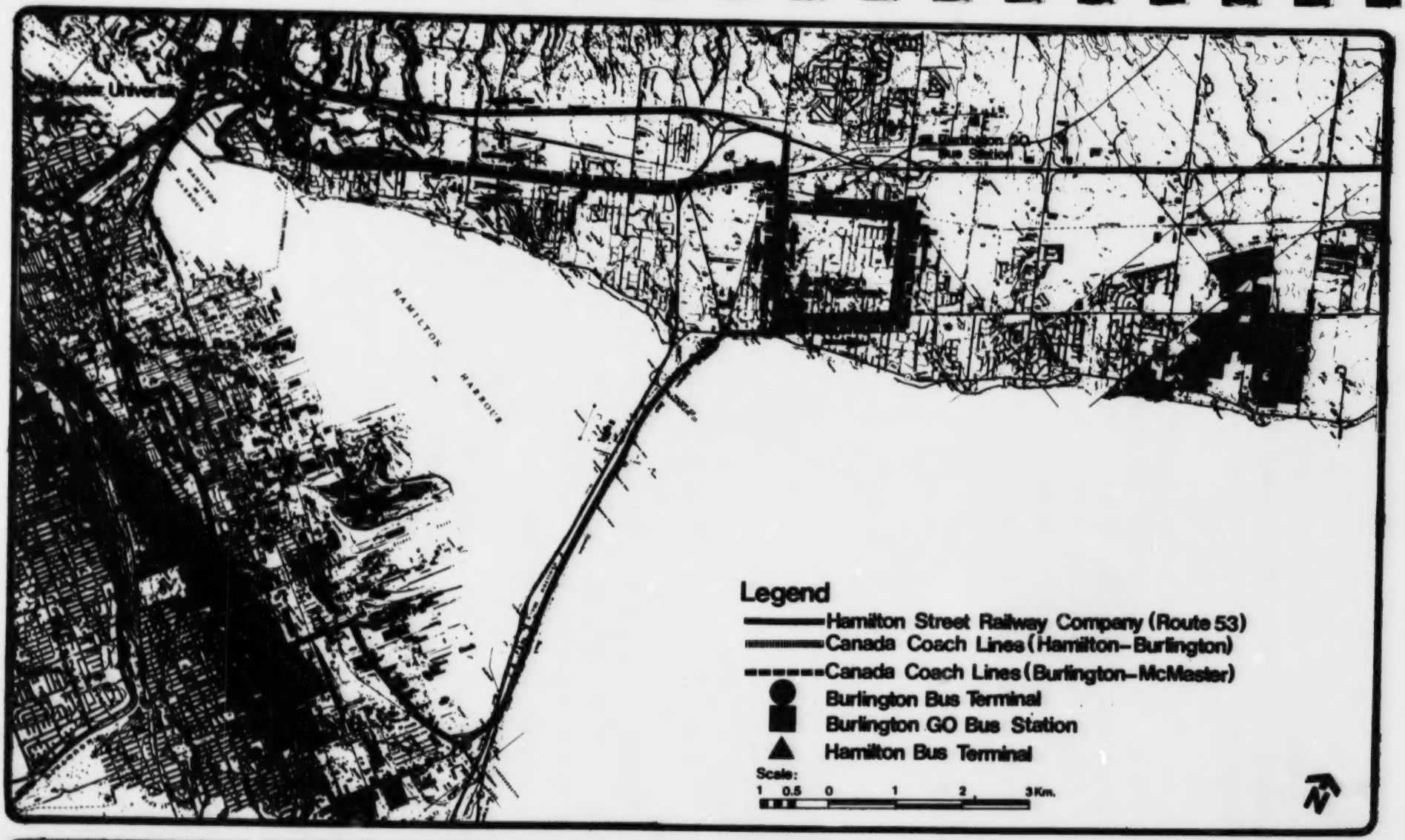
Canada Coach Lines

Canada Coach Lines, a wholly owned subsidiary of the Hamilton Street Railway provides predominantly inter-regional transit services originating in the Region of Hamilton-Wentworth. Of particular interest to this study are two Canada Coach Line Services, Route 16, operating between Hamilton and Burlington. The Hamilton-Burlington Service via Plains Road, Schedule Table 8, operates between the Hamilton Terminal and the Burlington Bus Terminal; the Burlington-McMaster University Service, Schedule Table 9, provides service between McMaster University, the Burlington Bus Terminal and the Burlington GO Terminal as illustrated in Figure 3.6.

The service, which is operated on weekdays only, utilizes three buses in the A.M. peak hours between 6:45 A.M. and 8:30 A.M. and two buses in the P.M. peak hours between 4:40 P.M. and 6:30 P.M. All buses make one round trip run which terminates at the Hamilton Terminal.

3.6 Provincial Planning

A number of planning studies have been undertaken by the Ministry of Transportation and Communications, Ontario, which involve or impact the transit services in the Lakeshore West Corridor. In particular, the study entitled "Inter-Regional Bus Transit Study - Oakville to Hamilton" March 1978, and the Technical Appendix to this study identify the major provincial and regional planning studies addressing bus transit in the Lakeshore West Corridor.



Lakeshore Route Bus Transit Study
Ministry of Transportation and Communications

Fig. 3.6

HSR-CCL Route Map
Hamilton-Burlington

The recommendations of the 1978 study included the proposal for a commuter bus service to be initiated between Hamilton and Burlington and implementation of this service is currently being investigated by T.A.T.O.A.

With regards to rail services in the Lakeshore West Corridor, the Ministry's position is: "the Province has no current plans to improve the existing GO Rail services between Burlington and Hamilton. The feasibility of improved services between Oakville and Burlington is now being studied; however, major service improvements on this link cannot be expected to be operational before late 1981".

3.7 Recent Inter-Regional Transit Subsidy Programs

In July 1979, the Province introduced a subsidy program to finance the net deficit incurred on specific route segments of existing municipal transit services crossing regional boundaries within the T.A.T.O.A. area. The program is intended to relieve municipalities of the financial burden associated with their provision of inter-regional transit services.

The newly introduced program provides for a subsidy amounting to 100 percent of the net deficit, paid by the M.T.C., for that portion of the service external to the operator's home-base municipality. Although the program was introduced to support existing route segments, it can be extended to include future services if, after review by M.T.C., they are deemed necessary for efficient inter-regional transit passenger movement.

In addition, T.A.T.O.A. has recently been investigating and experimenting with fare integration with local municipal transit services providing connections with the GO Train. Brampton/ Bramalea were chosen for initial experimentation. Recently, the Town of Oakville was selected for an expansion of the concept, thus providing Oakville Transit riders with reduced travel costs when connecting and transferring to the GO Train.

4. Analysis of Existing Transit Services

4. ANALYSIS OF EXISTING TRANSIT SERVICES

The primary study activity focused on the analysis of existing inter-regional and local transit services operated in the Lakeshore West corridor. Particular emphasis was placed on the review of the GO Lakeshore Bus, Route 2682, and the other services operated by T.A.T.O.A. throughout the corridor, and the Mississauga Transit Route No. 23.

This chapter presents a summary of relevant statistics collected and developed during the course of this study.

4.1 GO Transit Bus Services

As outlined in Chapter 3, the study focused on a review of the primary bus services operated by T.A.T.O.A. within the study area. Specifically, these included:

- GO Lakeshore Bus Route 2682
- GO Bus Route 2683A
- GO Bus Route 2683B

Based on the analysis of ridership and financial records periodically collected by T.A.T.O.A., and the results of an on-board post card questionnaire survey conducted during the data collection phase of this study, the following statistics were developed:

1) Average Ridership

	Daytime	Evening	Total
Route 2682			
Weekday	2 670	170	2 840
Saturday	1 120	180	1 300
Sunday	590	180	770
Route 2683A			
Weekday	200		
Route 2683B			
Weekday	450		

2) Revenue/Cost* Ratios

	Daytime	Evening	Total
Route 2682			
Weekday	.46	.21	.43
Saturday	.43	.26	.40
Sunday and Holidays	.45	.28	.39
Route 2683A	.45**		
Route 2683B	.58**		

* 1979 Corridor Average Cost/km = $1.68 (includes an historically based mark-up for administration and plant costs of 40 percent).

** R/C ratio adjusted to reflect idle time between peak periods.

3) Current Estimated Annual Deficits

	Daytime	Evening	Total	Annual
Route 2682				
Weekday	$ 2 860	$ 575	$3 435	$ 869 000
Saturday	1 685	580	2 265	118 000
Sunday/ Holidays	825	520	1 345	81 000
	$861 000	$207 000	$7 045	$1 068 000
Route 2683A	$ 355			$ 90 000
Route 2683B	$ 310			$ 78 000
TOTAL				$1 236 000

Route 2682

Seating capacity utilization and ridership characteristics for the Lakeshore Route bus service are presented in Figures 4.1 and 4.2 respectively. Of particular interest are the statistics indicating a high percentage of ridership between adjacent municipalities and local travel within a municipality.

There are a number of significant characteristics of the Lakeshore Bus Route 2682 which indicate a strong potential for rationalization and integration with other transit services in the Lakeshore West corridor. A brief synopsis of a number of the key observations follows.

GO LAKESHORE BUS SERVICE

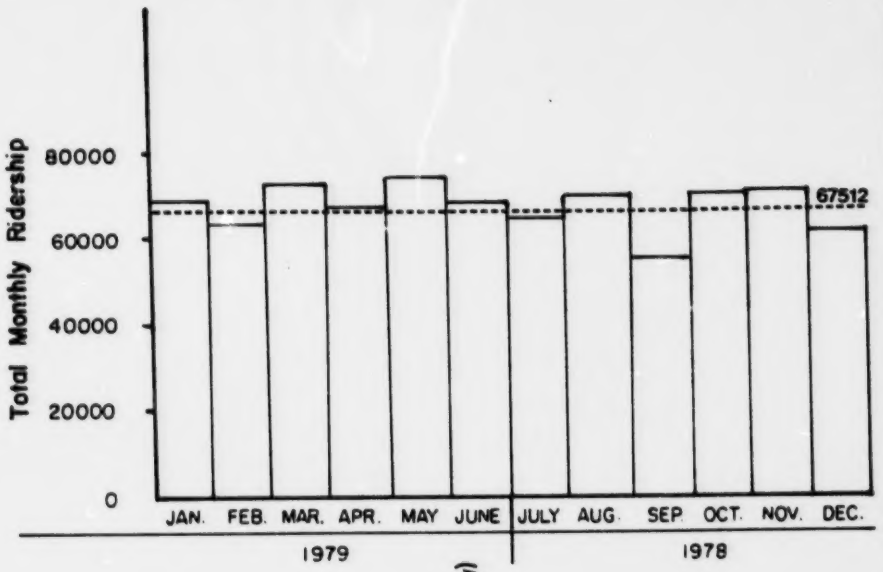
AVERAGE CAPACITY UTILIZATION (EASTBOUND)

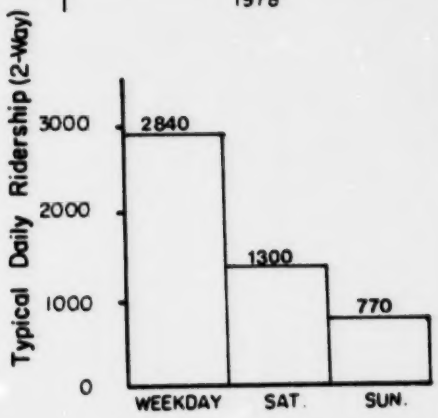
GO Lakeshore Service - Weekday

Link	No. of Buses	Seating Capacity	Link Ridership Volume	Capacity(1) Utilization
Hamilton-Burlington	29	1363	546	40%
Burlington-Oakville	28	1316	281	21%
Oakville-Mississauga	29	1363	357	26%
Mississauga-Toronto	29	1363	626	46%

GO Lakeshore Service - Saturday

Link	No. of Buses	Seating Capacity	Link Ridership Volume	Capacity(1) Utilization
Hamilton-Burlington	16	752	357	48%
Burlington-Oakville	16	752	186	25%
Oakville-Mississauga	15	705	239	34%
Mississauga-Toronto	15	705	273	39%





(1) Based on June, 1979 survey data and based on scheduled trips and scheduled extra buses at an average seating capacity of 47.

(2) Based on May, 1977 ticket lift, ridership on scheduled trips, including extra buses, the GO express service operated at an average seating capacity and utilization of 65%

Fig.4.1

GO LAKESHORE BUS SERVICE UTILIZATION

Lakeshore Route Bus Transit Study

GO TRANSIT
LAKESHORE SERVICE - ROUTE 2682
RIDERSHIP CHARACTERISTICS*

VARIABLE	WEEKDAY	SATURDAY
. TRIP FREQUENCY		
- 4 to 6 days/week	73%	22%
- 1 to 3 days/week	13%	25%
- less than 1 day/week	14%	53%
. TRIP PURPOSE		
- work	82%	27%
- school	3%	1%
- shopping	6%	18%
- social	4%	47%
- other	5%	7%
. TRIP DURATION		
- less than 30 min.	22%	30%
- 30 to 60 min.	48%	35%
- 60 to 90 min.	23%	24%
- 90 to 270 min.	7%	11%
. ROUND TRIP		
- yes	70%	57%
- no	30%	43%
. ACCESS MODE		
- walk	78%	67%
- bus	12%	21%
- other	10%	12%
. EGRESS MODE		
- walk	81%	67%
- bus	13%	25%
- other	6%	8%
. TRANSIT TRANSFERS		
- none	76%	56%
- one end	21%	36%
- both ends	3%	8%
. RIDERSHIP BETWEEN ADJACENT MUNICIPALITIES	65%	60%
. LOCAL RIDERSHIP	11%	6%

* Based on June 1979 survey

RIDERSHIP CHARACTERISTICS

Fig. 4.2

Lakeshore Route Bus Transit Study

- the local GO Shuttle service routing and the introduction of the commuter service between Hamilton and Burlington present routing overlaps and the potential to rationalize transit service while maintaining a similar level of service.

- service does not connect to GO Rail stations to offer an alternative means of transit access to Metro Toronto.

- service does not conveniently interface with local transit services in Oakville or Mississauga.

- honouring of operator's historical licence restrictions prevent pick-up of passengers over 20 kilometres (28%) of the total 72 kilometre route length (from Beechwood Avenue easterly).

- 23 percent of ridership is achieved in the link between Mississauga and Toronto and is presently served by Mississauga Transit connecting to the Long Branch GO station and T.T.C. loop. In addition, Mississauga Transit offers connection with transfers to the Islington subway station.

- M.T.C. subsidizes the deficit of competing services across regional municipal boundaries.

- current cost recovery of 42% and total annual operating deficit in excess of $1 million is not desirable.

- the long route length is providing short distance trips primarily between adjacent municipalities.

Route 2683A

The following is a description of the key considerations related to this peak service operating between Oakville and Toronto.

- 65% of existing ridership have the option to use Oakville Transit routes connecting to the GO train. Spare capacity exists in the Oakville Transit routes.

- route offers express bus service to downtown Toronto, at no fare surcharge, thus competing with local transit services and GO Rail line.

- current cost recovery of 45% and annual operating deficit of $90 000 is not desirable.

Route 2683B

The following is a description of the key considerations related to this peak service operating between Mississauga and Toronto.

- significant duplication exists along Dundas Street between GO Route 2683B and Mississauga Transit Route 1.

- Mississauga Transit Route 1 provides both local and express connections to the Islington subway station.

- Mississauga Transit has adequate capacity to accommodate the current ridership on Route 2683B.

- route provides express bus service to/from downtown Toronto with no fare surcharge.

- current cost recovery of 58% and annual deficit of $78 000 is not desirable.

- service would be competing in the near future with the proposed Streetsville GO rail line.

Hamilton-Burlington Corridors

Inter-regional transit services between Hamilton and Burlington are provided by GO Transit and local carriers crossing municipal boundaries, namely the Hamilton Street Railway and Canada Coach Lines. The following table outlines the service characteristics of routes operated in the north and south corridors.

Hamilton to Burlington - Existing Services

Service	Terminal Points	Characteristics
GO Train	Hamilton - Toronto	-2 trains in peak
GO Shuttle	Hamilton - Oakville	-via 403, Waterdown Road and Plains Road -20 minute peak, 60 minutes off-peak and evening
GO Express	Hamilton - Toronto	-via 403, Q.E.W. - no stop in Burlington -60 minutes frequency
GO Lakeshore	Hamilton - Toronto	-via 403, Hwy. 6, Plains Road -no connection to GO Station -30 minute peak, 60 minutes off-peak, 120 minutes evening
HSR-Route 53	Hamilton-Burlington	-via Beach Boulevard and local service in both Hamilton and Burlington -30 minute peak, 60 minutes off-peak
CCL-Route 16	Hamilton - Burlington	-one direction service on Plains Road, Hwy. 403 -3 trips in A.M. and P.M. peak periods.

Based on the City of Burlington Journey to Work Survey and origin-destination surveys undertaken by the Ministry of Transportation and Communications, Ontario (1972), the work trip travel demand between the two municipalities is as follows:

		Daily One Way Person Trips	
From (Home)	To (Work)	Via Hwy. 403	Via Q.E.W.
Burlington	Hamilton	3 000	7 000
Hamilton	Burlington	3 000	3 000
		6 000	10 000

Current transit modal split in the two corridors between Hamilton and Burlington, Highway No. 403, and the Queen Elizabeth Way/Beach Strip amount to approximately three percent. Major factors accountable for the low transit penetration include:

- no adequate services provided to the Hamilton industrial area.

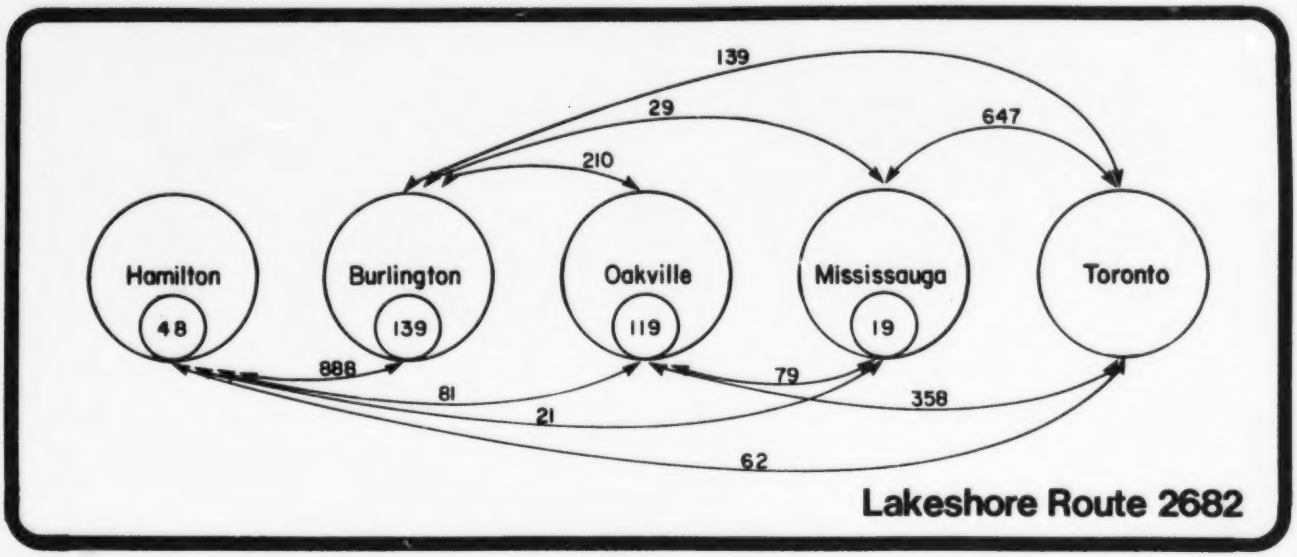
- no express or semi-express service operated between Hamilton and Burlington along the Beach corridor.

- duplication of services between GO Shuttle, GO Lakeshore and CCL Route 16 exist in the Hamilton to Burlington Highway No. 403 corridor.

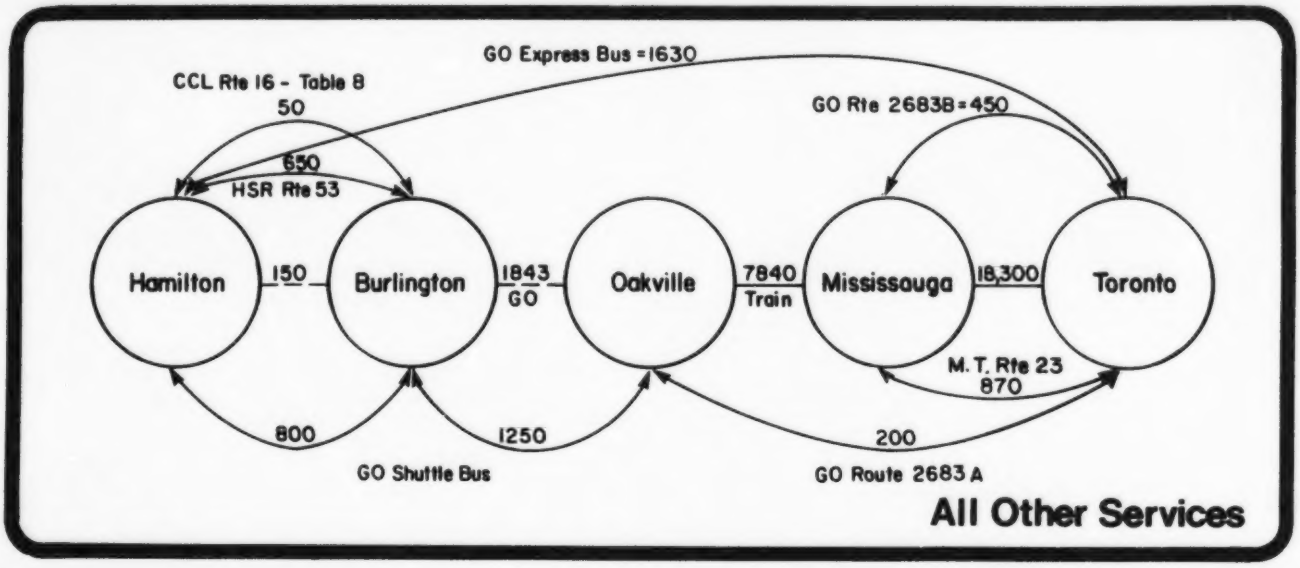
4.2 Municipal Transit Services

The study included a review of the municipal transit services operated within the study area to assess complementary and duplications of service between inter-regional bus routes operated by GO Transit and local transit system routes.

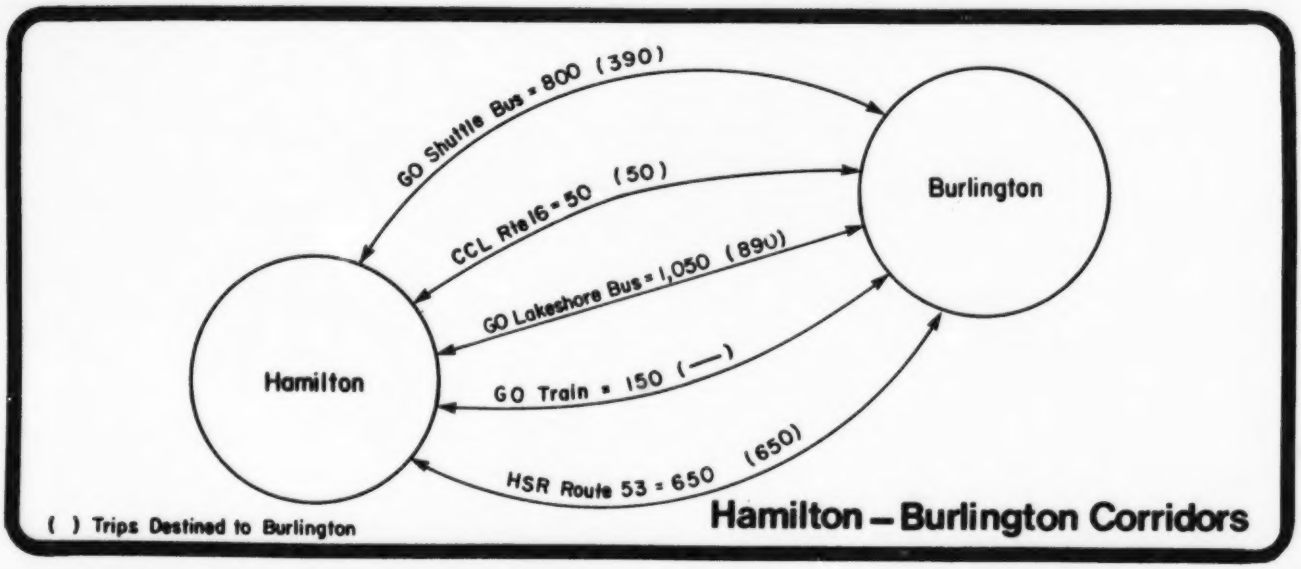
The following table presents a brief synopsis of the operating characteristics of the municipal transit services operated in the study corridor. This information is supplemented by data presented in Chapter 3 and in the Technical Appendix to this report.



Lakeshore Route 2682



All Other Services


GO Shuttle Bus = 800 (390)
CCL Rte 16 = 50 (50)
GO Lakeshore Bus = 1,050 (890)
GO Train = 150 (—)
HSR Route 53 = 650 (650)
Burlington
Hamilton
( ) Trips Destined to Burlington

Hamilton – Burlington Corridors

Average Weekday - 2-Way
Existing Link Volumes

Lakeshore Route Bus Transit Study

Fig. 4.3
Existing Ridership Characteristics

	Hamilton	Burlington	Oakville	Mississauga
Adult Fare (1979)	.40	.40	.40	.50
Cost/Km (1978)	1.14	.90	.90	1.01
Cost/Mile (1978)	1.84	1.45	1.45	1.63
Rev/Km (1978)	.62	.43	.37	.49
Rev/Mile (1978)	1.00	.69	.60	.79
R/C Ratio (1978)	.54	.47	.42	.49
Def/passenger (1978)	.28	.33	.42	.41
Basic Provincial Operating Subsidy (as a % of cost)	17.5	22.5	25.0	17.5
Days of Service Per Week	7	7	6	7

Following is a brief description of key observations related to local transit routes operated within the study area.

Hamilton Street Railway Company

- Route 53, operating between the Hamilton Terminal and the Burlington Bus Terminal, provides inter-regional bus transit service between the two municipalities.
- the route does not serve the Hamilton industrial area.
- since the introduction of monthly passes, ridership has substantially increased.

Canada Coach Lines

- Route 16 provides peak period bus service between the Hamilton and the Burlington Bus terminals.
- additional services are provided between the Burlington Bus Terminal and McMaster University.

- both routes exhibit low commuter transit ridership (refer to Figure 4.3).

Burlington Transit

- service operates as a feeder system to the GO Transit inter-regional bus services provided from the Fairview Street GO Station and the Burlington Bus Terminal.

- GO bus Routes 2682 and 2680 provide local service within the Burlington municipal boundary. Passengers pay the local Burlington Transit fare and the City pays the fare difference and an administration charge to T.A.T.O.A.

- on a typical weekday approximately 160 passengers use GO Transit for local service within Burlington.

Oakville Transit

- local transit system routes focus on the GO Terminal, providing feeder service to inter-regional rail and bus services.

- spare capacity exists on the Oakville Transit routes connecting to the rail station.

- GO Bus Route 2683A, providing express peak period service to/ from downtown Toronto, is in direct competition with local transit routes.

- no transit service is provided to the Clarkson GO Rail Station.

Mississauga Transit

- Mississauga Transit Lakeshore line (Route #23) duplicates routing of GO Bus Route 2682 between Erin Mills Parkway and the Long Branch Loop along Lakeshore Road.

- Mississauga Transit Route No. 1, terminating at the Islington T.T.C. Subway Station, provides an adequate alternative service to passengers currently riding the GO Bus Route 2683B.

- adequate capacity exists on Routes 1 and 23 to accomodate potential ridership diversions from existing GO bus routes in the corridor study area.

Detailed ridership and transit service characteristics in each municipality are presented in the separately bound Technical Appendix to this report.

4.3 Major Considerations in the Lakeshore West Corridor

There are a number of major considerations affecting the present and future efficiency, ridership, duplication and effectiveness of the transit services in the Lakeshore West GO bus corridor. These have been considered in the development, assessment and evaluation of alternatives. Highlights of a number of these considerations are briefly described.

1) The GO Shuttle bus service (Route 2680) provides local service in Burlington by diverting from Highway No. 403 at Waterdown Road and travelling along Plains Road to connect with the Fairview Street GO Station.

2) The new routing and scheduling of the GO express bus between Hamilton and Toronto has reduced the travel time by 20 minutes.

3) Negotiations are currently underway with the Hamilton Street Railway for the introduction of a commuter bus service between Hamilton and Burlington, replacing the existing service operated by the Hamilton Street Railway, Route 53.

4) A number of service overlaps with local municipal transit routes exists in the Lakeshore GO bus corridor:

- GO Route 2682 and Mississauga Transit Route 23
- GO Route 2683A and Oakville Transit Routes
- GO Route 2683B and Mississauga Transit Route 1

5) With the introduction of the new bi-level cars, the rail service has additional line capacity, with the exception of particular peak trips, to accommodate an increase in ridership without altering the frequency of service.

6) A duplication of service is provided between the area municipalities in the Lakeshore West Corridor by the bus and rail services provided by T.A.T.O.A.

7) The potential for increased ridership in the future, is significantly affected by the expected growth in population in the transit service corridor. Based on available regional planning studies, the following growth rates are projected for the zones immediately adjacent to the Lakeshore GO bus service:

Estimated Annual Population Growth Rates,
Lakeshore Corridor, 1976 - 2001

Mississauga	0.7%
Oakville	1.3%
Burlington	1.2%

8) The following table presents the annual percentage change in ridership for the GO Lakeshore, GO Express, GO Shuttle and GO Rail services. The Lakeshore West bus service has been experiencing a decrease in ridership since 1977, while the rail service has experienced continuous increases in ridership.

URBAN DOCUMENTATION CENTRE
RESEARCH UNIT FOR URBAN STUDIES
McMASTER UNIVERSITY
HAMILTON, ONTARIO

	Percentage Change in Ridership*		
	1976-1977	1977-1978	1978-1979
GO Lakeshore	+ 6.7%	- 4.3%	- 1.1%
GO Shuttle	+ 5.1%	- 1.8%	- 1.7%
GO Express	+ 3.2%	- 6.4%	+ 10.3%
GO Rail	N/A	+ 7.9%	+ 8.7%

* The percentage changes in ridership identified in the table are somewhat affected by changes in T.A.T.O.A.'s monitoring and reporting procedures.

9) The Milton/Streetsville GO Rail line is scheduled for opening in 1981. The new service may potentially divert ridership from the existing Lakeshore West bus and rail services.

10) Surveys of the parking lots at the Clarkson GO Rail Station indicate approximately 90 vehicles originating in the East Oakville area.

11) A number of competing services are being operated in the Hamilton to Burlington corridors; however, ridership statistics indicate a current modal split of approximately 3 percent.

12) Previous studies indicate a high degree of commuter travel in both directions between Hamilton and Burlington that is not adequately served by public transit.

It may be concluded that due to the most recent ridership trends on the GO Lakeshore service, the low anticipated population growth in the corridor and the competing services, increases in transit ridership in the future will likely come more from a shift in travel characteristics and modal split than from an increase in population.

The principal competing services that will affect the GO Lakeshore ridership are those services already provided by T.A.T.O.A.; namely: the rerouting of the shuttle bus to provide local service; the rerouting of the express bus to decrease travel time; the introduction of the commuter service between Hamilton and Burlington currently under negotiation and the increase of parking lot and rail services capacity in the corridor. Each of these improvements while potentially reducing the ridership on the GO Lakeshore bus service offer the potential for rationalizing and integrating services.

5. Alternative Transit Service Concepts

5. ALTERNATIVE TRANSIT SERVICE CONCEPTS

The development of alternatives phase of this study concentrated on identifying alternative routing schemes for the principal inter-regional bus transit routes under review in order to provide a more efficient and integrated system of transit service in the Lakeshore West Corridor.

Alternative service concepts were developed for the Lakeshore GO bus service (Route 2682), the Oakville peak service (Route 2683A) and the Mississauga peak service (Route 2683B) taking into account the major considerations affecting services and ridership as identified in section 4.3. The key consideration was to develop a routing which would reflect the objective of rationalizing and integrating transit services while satisfying current and near future inter-regional demand.

Following is a brief description of the alternative transit service concepts considered in this study.

Lakeshore GO Bus Service (Route 2682)

Alternative Service Concepts

Concept	Description
°Status quo	maintain existing routing, scheduling and operating procedures
°Modify western Terminus	initiating and terminating all services at a new terminal/interface location

A. Fairview Street - Burlington GO Station routing to maintain service along Plains Road westerly to Brant Street, south to Lakeshore Road and connecting with the downtown Burlington bus terminal.

°Modify eastern Terminus — initiating and terminating all services at a new terminal/interface location

A. Islington Bus Terminal
service to be routed from the terminal westerly along Dundas to 427/Browns Line, to Lakeshore Road, providing connection with T.T.C. and Mississauga Transit service.

B. Port Credit GO Rail Station
service to be routed south to Lakeshore Road and westerly along existing routing providing connection to GO Rail and local transit services.

C. Clarkson GO Rail Station
service to be routed south to Lakeshore Road and westerly along existing routing providing connection to GO Rail and local transit services.

The Lakeshore GO bus schedule would be modified so as to provide an adequate interface with the GO Train; this requires an increase in the frequency of service during peak periods from 30 minute service to 20 minute service.

Service Considerations

°Evening service — presently 120 min. frequency on weekdays, Saturdays, Sundays and Holidays.

°Saturday service — presently 60 min. frequency service provided.

°Sunday & Holiday service — presently 120 min. frequency service

Oakville Peak Service (Route 2683A)

Alternative Service Concepts

°Status quo — maintain existing routing, scheduling and operating procedures.

°Withdrawal — eliminate service and relinquish ridership to local transit to connect with rail service

Mississauga Peak Service (Route 2683B)

Alternative Service Concepts

°Status quo — maintain existing routing, scheduling and operating procedures.

°Withdrawal — eliminate service and relinquish ridership to local transit to connect with T.T.C. system.

Hamilton to Burlington Corridors

Inter-regional Transit Requirements

°Review current and near future inter-regional transit requirements in the north (Highway No. 403) and south (Beach) corridors

°Assess the need for express service between the Hamilton industrial area and the City of Burlington.

Figure 5.1 provides a schematic of the alternatives considered in the study.

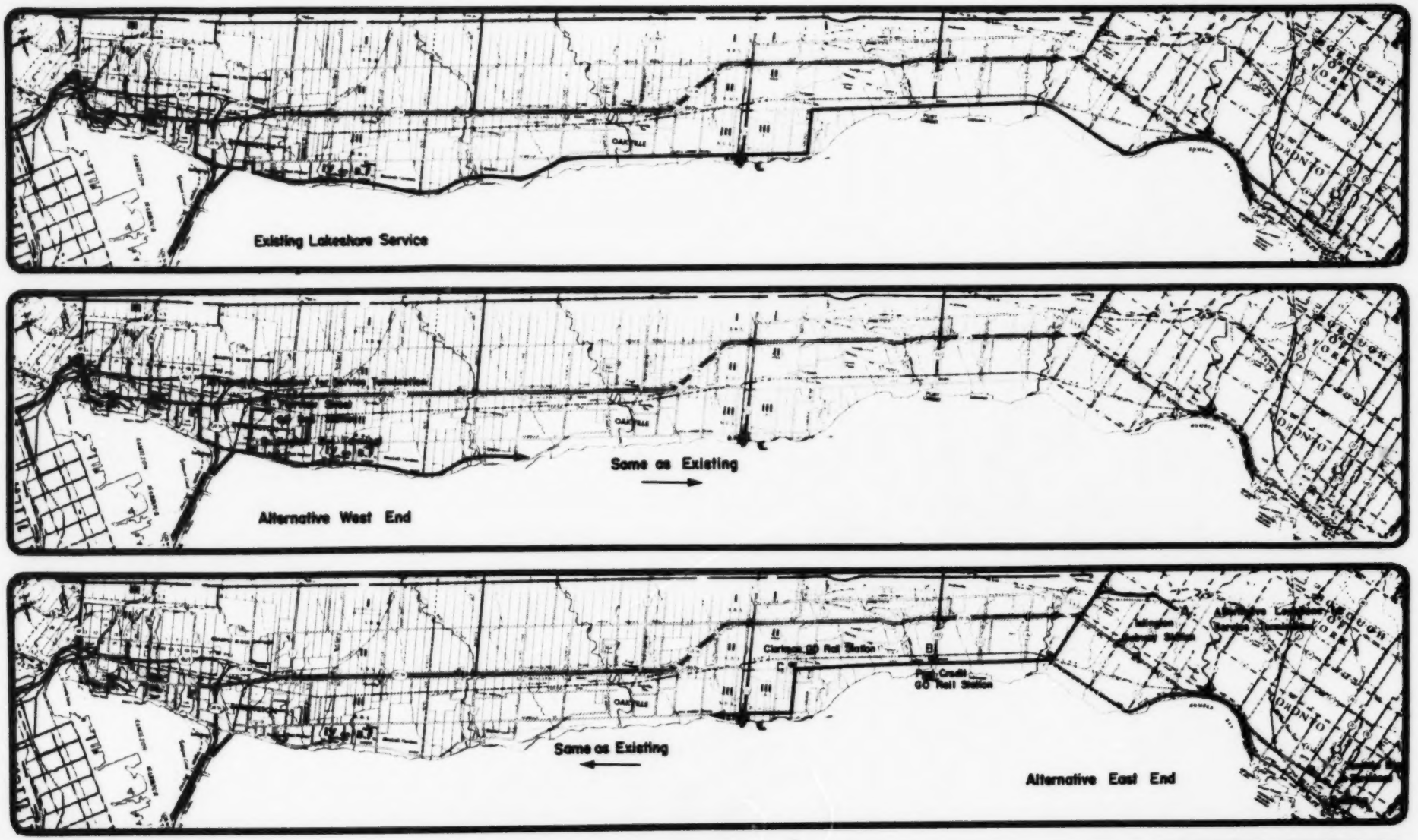


Fig. 5.1

Alternative Service Concepts – Lakeshore GO Bus Service

Lakehore Route Bus Transit Study

The impacts of these alternative service concepts were reviewed by the Technical Committee to assess the relative performance of each alternative in relation to:

- deficiencies and duplications of service
- degree of rationalization and integration of transit services
- provincial and municipal subsidies required
- required level of service within the study horizon
- ease of implementation

Chapter 6 provides a synopsis of the evaluation process and criteria employed in the selection of the recommended alternative.

6. Comparison and Evaluation

6. COMPARISON AND EVALUATION

The alternative service concepts developed as potential improvements to inter-regional transit services in the Lakeshore West Corridor were reviewed in detail based on a number of criteria which would permit an objective assessment and evaluation.

The principal assessment criteria included a review of the following components:

- level of service provided
- duplication/alternative services
- ridership impacts
- financial impact
- implementation requirements

6.1 Evaluation Assumptions

During the process of evaluating the alternatives a number of underlying assumptions have been made in order to present the alternatives in a comparable manner. The principal assumptions are as follows:

- if alternative transit services, serving the origin-destination of the existing Lakeshore route passengers, provide similar levels of service, then it is assumed that these riders will be maintained in the system.

- if by eliminating a section of the existing route, additional capacity is required on the alternative transit service, an allowance for this additional cost incurred is included.

- revenue and operating cost estimates are based on 1979 data and current ridership characteristics.

- sufficient capacity exists or is expected to be available on other GO transit services in the corridor and on local municipal transit services to accommodate the shifts of existing Lakeshore ridership under the alternative service concepts. Where specific capacity limitations exist, an allowance for supplemental service has been made.

6.2 Evaluation Criteria and Procedure

In order to assess the effectiveness in the Lakeshore corridor of the alternative transit service concepts described in Chapter 5, a number of performance parameters were generated for each potential service improvement scheme. The variables computed for each alternative included:

- annual ridership - based on 1979 origin-destination survey and ridership statistics to date.
- annual revenue - based on 1979 origin-destination survey and a sample of the distribution of fares (single multiple and pass) applied to annual ridership ($0.90 per passenger).
- annual bus km - total route kilometres travelled based on scheduled trips and scheduled extras based on a 30 min. peak, 60 min. off-peak and 120 min. evening service. For those services connecting to a GO train station, the peak frequency has been reduced to 20 minutes.
- annual operating cost - based on average operating cost for Lakeshore West Corridor adjusted to account for administration, plant and general costs ($1.68 per kilometre).
- revenue/cost ratio - ratio of fare box revenue to operating cost.
- annual deficit - difference between annual revenue and annual operating cost.
- annual savings - potential reduction in annual deficit currently experienced.

- additional revenue on GO system - revenue from passengers transferred to other existing GO services in the GO system.
- annual T.A.T.O.A. net savings - annual savings on Lakeshore service plus the additional revenue on the GO system.
- additional revenue to municipalities - total revenue received by municipalities through ridership transfers.
- overall financial benefit - difference between annual T.A.T.O.A. net savings on Lakeshore service and cost of providing supplementary/ replacement bus services.
- total ridership affected - percentage of total existing ridership affected by alternatives.
- ridership forced to transfer - percentage of total existing ridership required to make a transfer in their total trip.
- ridership no longer served - percentage of total existing ridership no longer provided with convenient bus service.
- ridership incurring greater fare cost - percentage of total existing passengers required to pay an additional fare on a municipal system as a result of alternative terminal locations.

An evaluation matrix was developed to assess the effectiveness and performance of each service concept, based on alternative terminal locations at the East and West end. The experience and expertise of the Technical Committee provided the necessary guidance to assess the relative importance of each performance measure of effectiveness and select the recommended service improvements.

The following sections briefly outline the impact on the existing ridership as a result of the alternative terminal locations and the alternate services that would be utilized by the displaced ridership. A review of the anticipated capacity utilization on these alternate services was also completed.

6.3 Lakeshore Route 2682 Ridership Impacts

The origin-destination survey recently conducted on Route 2682 - Lakeshore Bus Service identified two primary bus transit ridership corridors, namely the Hamilton to Burlington and the Mississauga to Toronto connections. A change in the terminal point at either end of the existing Lakeshore route would affect transit ridership not only on the Lakeshore service itself but on other services currently providing inter-municipal service in these corridors.

A. Western Terminus Impact

If the Lakeshore service is terminated at the Fairview Street GO Bus Station, transit riders currently travelling on the GO system between Hamilton and Burlington would be serviced by:

- the shuttle bus, operating between Hamilton and Oakville
- the C.C.L. Route 16
- future express bus service to the industrial area
- and the proposed commuter service along the Beach Strip.

It is expected that of the current average weekday total ridership, both directions, on the Lakeshore Bus Service between Hamilton and Burlington:

500 trips (45%)	would transfer to the shuttle service
380 trips (34%)	would transfer to the commuter and express services along the Beach Strip
85 trips (8%)	would transfer to the local bus service to connect to other inter-regional services
145 trips (13%)	would be served by the C.C.L. Route 16

It is also expected that of the 880 trips/day diverted to the shuttle bus and the commuter service, 450 trips/day (51%) would transfer to/from the Lakeshore Service at the Fairview Station or Burlington bus terminal to continue their trip. The corresponding estimates for Saturday Service are as follows:

330 trips (47%)	would transfer to the shuttle service
250 trips (35%)	would transfer to the commuter service and express services along the Beach Strip
80 trips (11%)	would transfer to the local bus service to connect to other inter-regional service
50 trips (7%)	would no longer be served

It is expected that 290 trips (53%) would transfer to/from the Lakeshore service.

B. Eastern Terminus Impact

The termination of the Lakeshore bus service at an eastern location other than at the existing Bay/Dundas terminal would impose a need for a transfer to other transit services for those passengers carried in the eastern section of the corridor. The following table identifies the total number of daily passengers, both directions that would be diverted to other transit services depending on the selected location for the termination of the Lakeshore Service at the east end.

It should be noted that the options to connect to the rail stations impose two significant constraints or impacts; namely, the peak period frequency would have to be changed to 20 minutes from 30 minutes to meet the train, and the present train schedule is not conducive to efficient bus operations, necessitating long layover periods at the rail stations to connect for the return trip.

Two-way Daily Ridership Diversion

Terminal	Weekday	Saturday	
Islington	1 200	510	Transferred from/to GO Lakeshore to/from T.T.C.
Port Credit	1 010	480	Transferred from/to GO Lakeshore to/from GO Train
	30	30	Transferred from/to GO Lakeshore to/from Mississauga Transit
	100	30	No longer served by GO Lakeshore (Alternative of Mississauga Transit to GO Train or T.T.C.)
Clarkson	700	340	Transferred from/to GO Lakeshore to/from GO Train
	150	100	Transferred from/to GO Lakeshore to/from Mississauga Transit
	510	170	No longer served by GO Lakeshore (Alternative of Mississauga Transit to GO Train or T.T.C.)

Oakville Peak Service - GO Route 2683A

The following is a brief synopsis of the operating and financial characteristics of the Route 2683A service:

average weekday ridership	=	200 (65% west of Trafalgar Road) (35% east of Trafalgar Road)
average fare per passenger	=	$1.48
revenue/cost ratio	=	.45
average weekday deficit	=	$ 355.00
annual deficit	=	$90 000.00

An alternative means of making the same trip exists for those travelling to and from the west part of Oakville (65%). However, this alternative potentially requires two additional municipal transit fares each way; Oakville Transit at the west end and T.T.C. at the east end, adding $0.90 to the cost of a one-way trip. Those east of Trafalgar Road do not have a viable alternative except the Lakeshore Service which would increase their travel time by approximately 25-30 minutes.

If service were eliminated the financial impact would be:

savings to T.A.T.O.A.	$90 000
additional revenue to Oakville Transit (65% of existing ridership)	$13 100
additional revenue to T.A.T.O.A. (train)	$64 400
potential revenue to Toronto Transit Commission (75% of existing ridership)	$18 000

Thus the overall financial benefit received by withdrawal of service would be approximately $186 000 at the expense of an increase in total fare.

Due to the express type nature of the present service, the fact that it does duplicate other T.A.T.O.A. services in the corridor, placing the local operator at a fare disadvantage, and potential changes in service, an interim measure would be to introduce a downtown surcharge of $0.40 on Route 2683A. The estimated annual deficit would be reduced to $70 000 with a projected revenue to cost ratio of approximately 57 percent.

Mississauga Peak Service - GO Route 2683B

The following is a brief synopsis of the operating and financial characteristics of Route 2683B service:

average weekday ridership	=	450
average fare per passenger	=	$0.96
revenue/cost ratio	=	0.58
average weekday deficit	=	$310
annual deficit	=	$78 000

An alternative means of making the same trip exists by a combination of Mississauga Transit - Route 1 and the T.T.C. subway. Mississauga Transit operates both local and express services on Route 1 connecting directly to the Islington subway station. The express service in combination with the subway provides a comparable

trip duration to Route 2683B and the total fare of $1.10 is only slightly above the existing average fare but equal to or less than the single adult fare on Route 2683B. If service were eliminated, the financial impact would be:

savings to T.A.T.O.A.	$78 000
additional revenue to Mississauga Transit	$56 500
additional revenue to T.T.C.	$67 800

Thus the overall financial benefit received would be approximately $202 000 with no appreciable increase in fares to the existing riders. Mississauga Transit has the available capacity to accommodate the additional ridership.

Due to the express nature of this service, and the forthcoming inauguration of the Streetsville GO Rail Line, an interim measure would be to introduce a downtown fare surcharge of $0.40. This measure would reduce the current deficit to $33 000 yielding a revenue/cost ratio of 82 percent.

7. Recommendations

7. RECOMMENDATIONS

Based on the detailed analysis and evaluation of the alternative service concepts for the rationalization and integration of bus transit services in the Lakeshore West Corridor, the following recommendations and service changes as illustrated in Figure 7.1 are proposed for introduction during the five year planning horizon according to a staged implementation schedule.

Service Improvements

Route 2682 - GO Lakeshore

Service improvements recommended to the existing GO Lakeshore bus Route 2682 have been developed as a comprehensive service design which fulfills the overall objective of this study, as well as addressing inter-regional transit requirements in the commuter corridors between Hamilton and Burlington.

One of the primary considerations in the selection of the recommended service concept was the observation that the Lakeshore Route, a long route serving short distance trips, exhibited its highest ridership at its terminal inter-municipal links, namely Hamilton to Burlington and Mississauga to Toronto. The recommended transit service improvements are as follows:

- Terminate the GO Lakeshore Route 2682 bus service at the Burlington GO bus/rail Station (Fairview Street), upon the implementation of the recommended revisions to the existing bus services in the Hamilton to Burlington transit corridors. The service will connect with the GO shuttle service Route 2680, the proposed commuter service along the Beach Strip and in the north corridor, the proposed express service to the Hamilton industrial area, and local Burlington Transit routes.

Existing GO Lakeshore Route 2682

Proposed peak period GO Commuter Service (Hamilton to Burlington).
Proposed peak period GO Express Service (Burlington to Hamilton Industrial)
Proposed GO Commuter Service Hamilton to Burlington (replacing existing H.S.R. Route 53.)

Recommended Improvements GO Lakeshore Route 2682

Lakeshore Route Bus Transit Study

Fig. 7.1
Recommended Improvements Lakeshore West Corridor

- Maintain the present Lakeshore Route 2682 service connection to the Burlington Bus Terminal (Elizabeth Street).

- Expand the peak period services of Canada Coach Lines, Route 16, between Burlington and Hamilton modifying the routing to be consistent with the existing Lakeshore service, to interface with the modified GO Lakeshore service at the Fairview Street GO Station and have T.A.T.O.A. administer the service.

  This would permit added flexibility to the GO Shuttle to be rerouted back onto Highway No. 403 after the construction of the Fairview Street interchange on the Q.E.W. and provide more reliable service in the north commuter link, thus potentially increasing ridership in this corridor.

- Provide a connection between the Hamilton Street Railway and Burlington Transit in the north-west corridor to maintain the local service link of the Lakeshore route.

- Implement a commuter service operated by the Hamilton Street Railway/Canada Coach Lines between Hamilton and Burlington replacing the Hamilton Street Railway Route 53 and have T.A.T.O.A. administer the service.

- In response to demand for additional service to the industrial area of Hamilton (Commuter Bus Study, Ministry of Transportation and Communications 1975, and Inter-Regional Bus Transit Study, Oakville to Hamilton, Ministry of Transportation and Communications 1978,) introduce a peak period express service between Burlington and the Hamilton industrial area, operated by the Hamilton Street Railway/Canada Coach Lines and administered by T.A.T.O.A., to supplement the proposed commuter service and potentially increase transit ridership along the Beach Strip corridor.

- Provide a connection on Lakeshore Route 2682 to the Clarkson GO Rail Station to offer transit riders an alternative means of access to and from the Lakeshore rail corridor and downtown Toronto via the GO train.

- Reroute the Lakeshore Route 2682 bus service to terminate at the Islington bus terminal/subway station as a first stage of route reduction.

- Upon introduction of the Milton/Streetsville GO Rail service and providing capacity exists on the Lakeshore GO Rail line, investigate the feasibility of terminating the Lakeshore GO Bus service at the Clarkson GO Rail Station to further reduce duplicating services and operating deficits.

- Maintain existing evening service on the basis of historical service, support to daytime services, in terms of return trip flexibility, and consistency throughout the T.A.T.O.A. system.

Route 2683A - Oakville Peak

- Introduce a fare surcharge as a means of achieving greater cost recovery due to the duplicate nature of this route and the high level of service offered to its riders. (Implemented April 1, 1980).

- Monitor the effect of other service connections to the Clarkson GO Rail Station to assess futher need of Route 2683A.

Route 2683B - Mississauga Peak

- Introduce a fare surcharge due to the high degree of duplication between this service and the Mississauga Transit Route No. 1 (Implemented April 1, 1980).

- Consider termination of Route 2683B upon introduction of the Milton-Streetsville GO Rail service.

Fare Integration

- Address the potential for fare integration between commuter oriented inter-regional transit services provided by T.A.T.O.A. or other carriers and municipal transit services operating in the area serviced by T.A.T.O.A. This policy would be consistent with the overall objective of increasing the transit ridership modal split for inter-regional and commuter oriented travel. (Oakville Transit/GO Train fare integration announced in April 1980).

Financial Impact

The financial impact of the recommended service concept for the GO Lakeshore corridor has been estimated on an annual basis using 1979 operating costs and revenues.

The following table presents a summary, by service component, of the overall financial impact of the recommended service concept for the Lakeshore corridor.

			Overall Annual Net Financial Benefit
Route 2682			
East	-	terminating Lakeshore service at Islington subway station, no fare integration with T.T.C.	$ 325 000
West	-	terminating Lakeshore service at Burlington GO station; providing peak period service on Lakeshore route between Burlington and Hamilton by increasing C.C.L. Route 16, Table 8, service; provide municipal service connections between H.S.R. and Burlington Transit in the north-west	$ 175 000
		Provide new peak period express services to Hamilton industrial area from Burlington.	$ -65 000
Route 2683A		fare surcharge of $0.40	$ 20 000
Route 2683B		fare surcharge of $0.40	$ 45 000
		TOTAL	$ 500 000

8. Implementation

8. IMPLEMENTATION

The strategy for implementing the study recommendations is contingent on a number of proposed changes to related components of the inter-regional transit system serving or affecting the Lakeshore corridor.

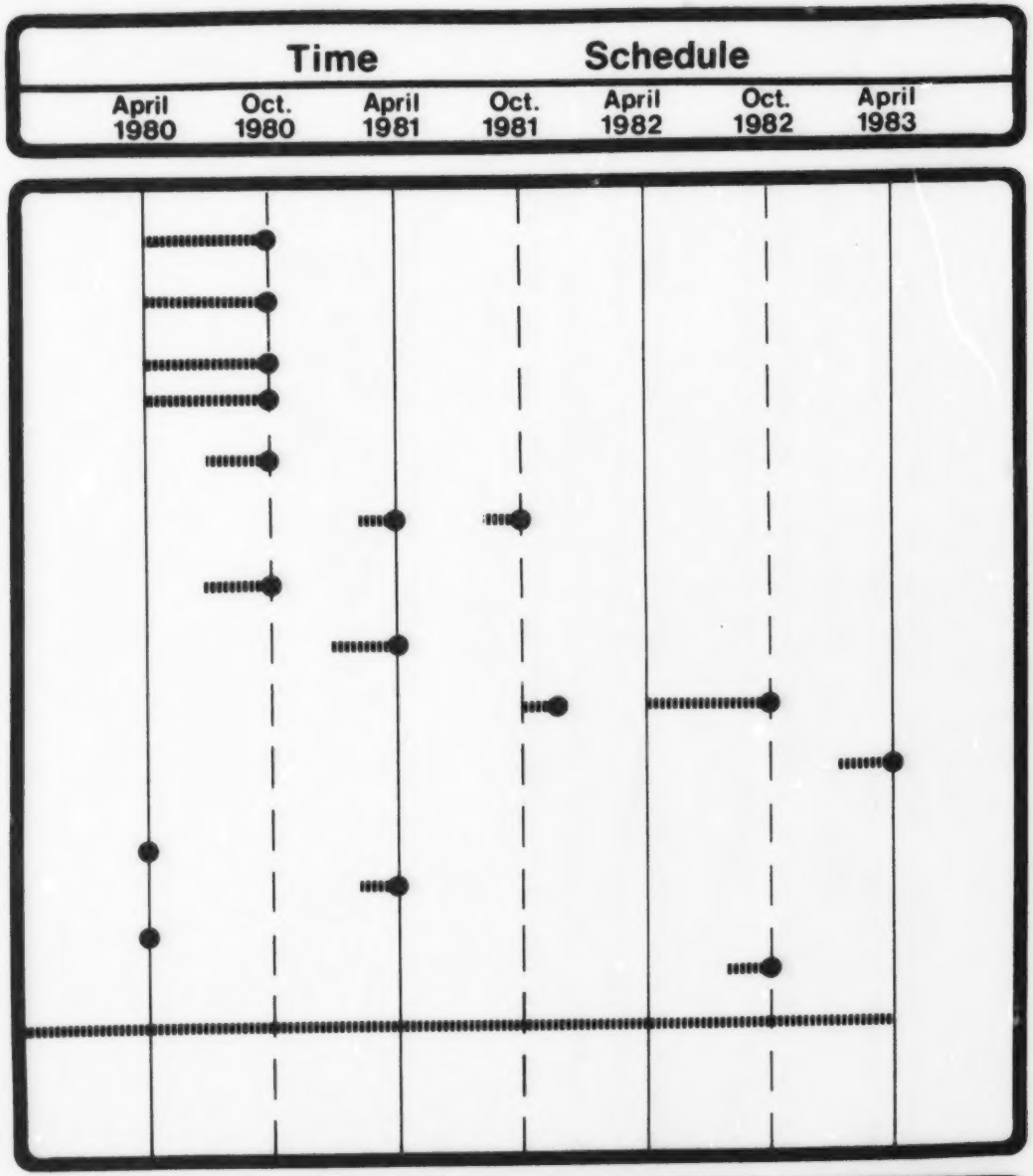
In the development of the recommendations, a key consideration in the analysis consisted of identifying the potential barriers to implementation of the alternative solutions and the identification of those issues which would require resolution in order to render the recommendation feasible. Of primary importance was the appreciation of the concerns of Municipal, Regional and Provincial authorities which would be involved in the development and implementation stages of the recommended service improvements.

Most of the existing administrative arrangements such as legislation, subsidy programs, etc., have been designed to meet urban requirements and hence, may actually serve as an impediment to the integration of inter-regional transit services. The development of an implementation strategy and schedule focused on the resolution of these competing objectives and on recognizing the dynamic nature of transit, in being able to accommodate significant changes in demand, financial resources or urban development.

In addition, there are a number of stages in the approval process, involving various levels of government, which must preceed the initiation of the implementation of the recommendations.

The proposed implementation strategy schedule is shown in Figure 8.1. The schematic illustrates the target milestone completion dates in order to implement all the necessary service improvements within the study horizon.

Service Improvements	Activity Description
Route 2682 - GO Lakeshore Bus Service	- Implement GO Commuter Bus Service Along Beach Strip
	- Introduce Peak Period Express Bus Service to Hamilton Industrial Area
	- Expand C.C.L. Route 16 Service
	- Connect HSR and Burlington Transit Routes in North-West Corridor
	- Terminate GO Lakeshore Bus Service at the Burlington GO Station
	- Review Effectiveness of Above Services
	- Connect Route to the Clarkson GO Station
	- Terminate Route at the T.T.C. Islington Terminal
	- Review Ridership Impact and Financial Performance
	- Terminate Route at Clarkson GO Station
Route 2683A - Oakville Peak Bus Service	- Introduce Fare Surcharge
	- Assess Further Need of Service
Route 2683B - Mississauga Peak Bus Service	- Introduce Fare Surcharge
	- Assess Further Need of Service
Fare Integration	- Address Potential of Expanding Fare Integration Schemes Between Inter-regional Carriers and Local Transit Services



● Target Completion Date
Pre - Implementation Activities

Fig. 8.1
Implementation Strategy Schedule
Lakeshore Route Bus Transit Study

In a climate of concern for potential fuel price increases and potential shortages, which may not only affect transit ridership demand but also the level of service which can be feasibly provided, it is necessary to maintain a degree of flexibility in terms of the dates of implementation, should energy contingency plans be enacted.

An important aspect of any strategic plan is the necessity to establish and maintain a review process to monitor the progress and impacts of the recommendations in order to better react and schedule the remainder of the program of recommendations.

T 354-9(e)

To: Recipients of Final Reports

Re: Lakeshore Route Bus Transit Study
Toronto-Hamilton

During the six month period since the presentation of study findings and recommendations to municipal officials, the Ministry has decided to deviate from a specific course of action recommended in the report, Notably, the Ministry, with the support of the Region of Hamilton-Wentworth and the Toronto Area Transit Operating Authority, now wishes to pursue the furtherance of existing and proposed transit services operated on behalf of the Region of Hamilton-Wentworth between the cities of Hamilton and Burlington through the retention of such services under municipal jurisdiction as opposed to, as recommended in the report, assumption and administration of these services by TATOA.

Retention of the above-noted interregional services under municipal jurisdiction is possible through the provision of financial assistance under the Provincial Cross-Boundary Funding Program. This program provides municipalities, operating eligible interregional transit services, with funds in addition to that available through the normal subsidy programs administered by the Ministry. The municipalities affected have been advised of the proposed revised course of action by letter of 27 August 1980.

I would also advise that the consultant's recommended interim first stage re-routing of Lakeshore Route 2682 bus service to terminate at the Islington Subway Station will not be pursued by the Ministry.

L.R. Kidman,
Manager.

JWS;fs